

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD new claim 15 in accordance with the following:

1. (Original) A process control method managing a semiconductor device manufacturing process, including an operation of a system with a plurality of sub-modules, comprising:

diagnosing an operational state of the plurality of sub-modules prior to beginning the semiconductor device manufacturing process;

checking a process condition of the system; and

informing a user of operational states of the sub-modules and the process condition of the system.

2. (Original) The process control method according to claim 1, further comprising:

diagnosing an operational state of I/O (input/output) devices of the sub-modules prior to beginning the semiconductor device manufacturing process; and

informing the user of the operational state of the input/output devices of the sub-modules.

3. (Original) The process control method according to claim 1, wherein the diagnosing of the operational state of the plurality of sub-modules includes operating a diagnosis program module to operate a sub-module to perform a diagnosis program.

4. (Original) The process control method according to claim 1, wherein the checking the process condition of the system includes operating a performance diagnosis program module, to check a performance of the system, to perform the performance diagnosis program.

5. (Original) The process control method according to claim 1, further comprising checking whether the operational states of the sub-modules and the process condition are

normal by comparing a predetermined normal operation value range with a value estimated from a result of the diagnoses of the sub-modules.

6. (Original) The process control method according to claim 1, further comprising selecting, by a user, which object or objects of a plurality of objects are to be diagnosed, prior to beginning the semiconductor device manufacturing process.

7. (Original) The process control method according to claim 1, wherein the diagnosing of the sub-modules includes diagnosing a performance condition of equipment based upon at least one of sampled voltage, currents, torques and operational speeds related to the equipment.

8. (Original) The process control method according to claim 7, wherein the equipment comprises system components, including various chambers, a conveyor, and a furnace, and parts of system components, including a valve, a pump, a controller, and a roller, in the semiconductor device manufacturing process.

9. (Original) The process control method according to claim 1, wherein the diagnosing of the operational state of the plurality of sub-modules includes selectively diagnosing some but not all of the plurality of sub-modules.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Original) A computer-readable medium comprising computer readable code controlling a system to perform the method of claim 1.

15. (New) A process control method managing a first semiconductor device manufacturing process, including an operation of a system with a plurality of sub-modules,

comprising:

diagnosing an operational state of the plurality of sub-modules prior to beginning the first semiconductor device manufacturing process; .
checking a process condition of the system; and
informing a user of operational states of the sub-modules and the process condition of the system.